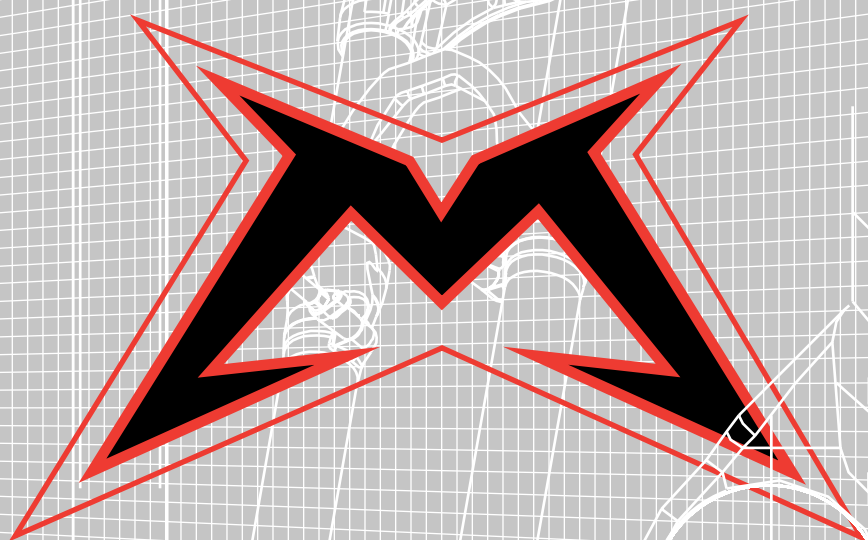
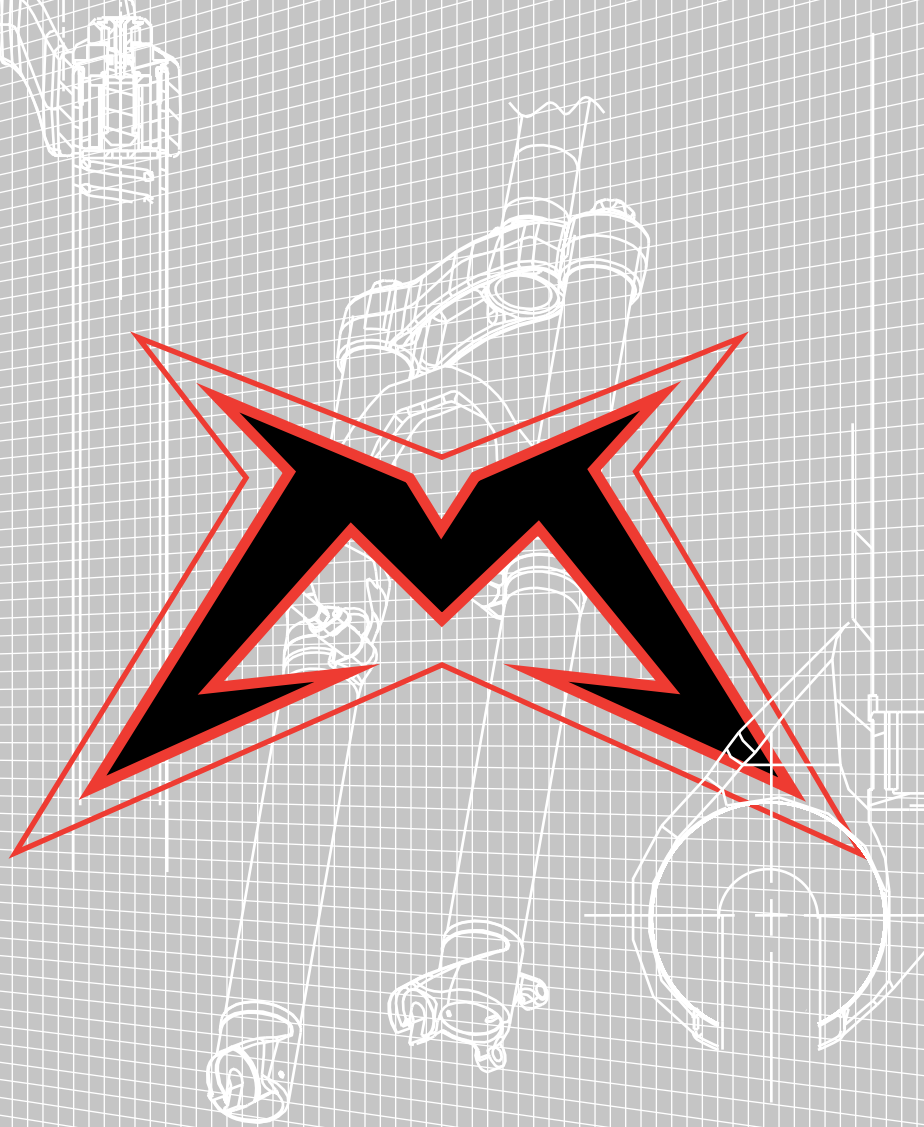


MONSTER



***MONSTER* SERIES**
OWNERS MANUAL
DEVELOPING SINCE 1949

Italiano

English

Français

Deutsch

Español

MONSTER 2003

**ISTRUZIONI PER L'USO E LA MANUTENZIONE
USE AND MAINTENANCE INSTRUCTION MANUAL
MODE D'EMPLOI ET ENTRETIEN
BETRIEBS - UND WARTUNGSANLEITUNG
INSTRUCCIONES PARA EL USO Y MANTENIMIENTO**

Important!

**The information you will find here below concerns your own safety!
Please read it carefully.**

1. REMEMBER THAT INCORRECT USE OF THE FORK CAN BE VERY DANGEROUS TO YOUR SAFETY. Carefully read this manual and follow all suggestions that you will find in it. Never use a fork that is damaged in any way (oil leakage, bent or cracked components, etc). The fork should be regularly overhauled for its entire life.
2. The fork can only be repaired and overhauled by authorized technicians. Take your fork to the shop where you bought it and they will send it to the closest Marzocchi Authorized Service Center in your country; this will protect your own safety by only using authorized technicians and original spare parts. Remember that not complying to this rule will void the warranty.
3. Each time you use your fork, always remember to check that:
 - all fasteners are properly adjusted as shown in the manual (nuts, bolts, etc.);
 - the tires are inflated to the correct pressure;
 - none of the components are bent, damaged or out of alignment;
 - the brakes work perfectly, they are correctly installed and adjusted.
4. Take special care of:
 - Installation onto the frame. The installation onto the frame and the steer tube setting must be carried out in compliance with the manufacturer's instructions. Do not make any modifications whatever to the steer tube to assemble the fork onto the frame.
 - Components modifications. Do not make any modifications to the components; do not try to slide the stanchion tubes out, always make sure that the fork has been correctly installed on the steer tube and the disk brake mounts are perfectly aligned with the calipers. Do not change the position of the fork crown in regard to the stanchion tubes.
5. Marzocchi does not guarantee the installation of the fork and refuses all responsibility for damages and/or accidents that may be caused by an incorrect installation.
6. Remember that not-compliance with only one of above precautions will immediately void the warranty.
7. Always follow the local bicycle laws and regulations and obey all traffic signals, signs and laws while you ride.

General information.

The fork you purchased was designed in compliance with the ISO TC 149 Norm (Safety for bicycles used off road and on rough ground).

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English

1 INTRODUCTION

Carefully read the instruction given in this manual and keep it for future reference.

This manual contains important information on the use and adjustment of the suspension system you have chosen and must therefore be read with extreme care. If you have any questions regarding the care and maintenance of your suspension system, please contact your nearest service center directly. A list of service centers can be found on the last page of this manual or on the Internet page www.marzocchi.com.

This manual does not explain how to assemble/disassemble the fork from the bicycle, the wheel, the headset or any other component directly or indirectly associated with the fork, but not actually part of the fork.

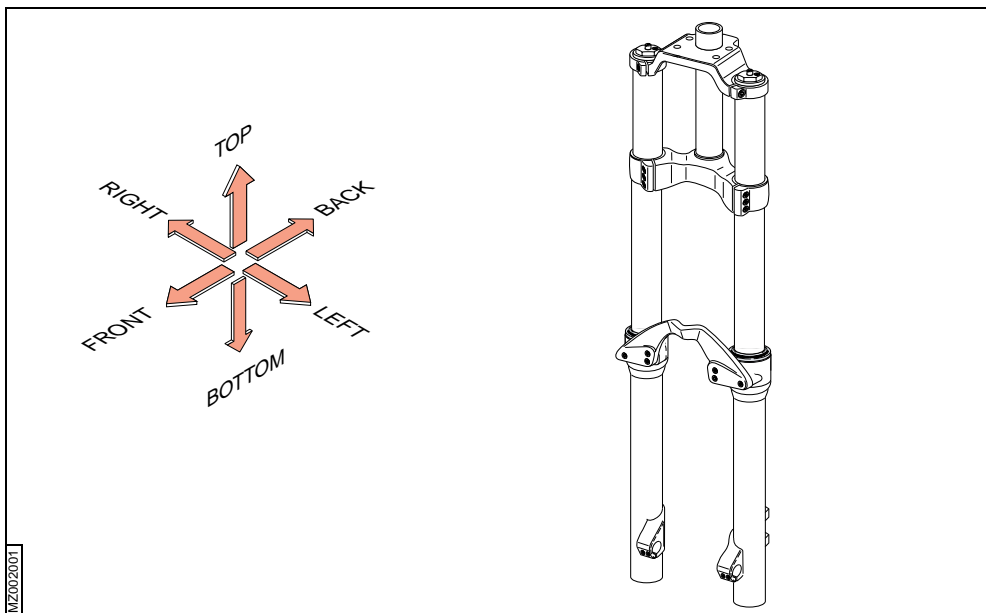
The manufacturer therefore reserves the right to make changes to the products, at any time and without prior notice to improve the products or to meet any productive or commercial requirements.

The user is the only person responsible for the correct application of the assembly instructions in the present manual.

Always ride in the full respect of the safety regulations, taking the greatest care.

1.1 Assembly

1.1.1 Orientation of the fork



1.1.2 Editorial illustrations

Descriptions inside a grey box contain information, instructions or procedures, which, if not respected, can cause damage to the forks, injuries to the user or damage to the environment.

Descriptions in italics contain information, descriptions or procedures recommended by MARZOCCHI for the best function of the fork.

1.2 Safety regulations

Please be advised that if the procedures provided in this manual are not properly performed, or if the instructions in this manual are not followed, an accident could occur, resulting in serious injury or death of the rider.

Please note that throughout this manual, reference is made that “an accident” could occur. Any accident could result in damage to your bicycle, its components, and, more importantly, could cause you or a bystander to sustain severe personal injury or even death.

- Always strictly follow the given periodical maintenance table (see. par. 4.2).
- Always use original MARZOCCHI spare parts.
- Never make any modifications whatever to the suspension system.
- Parts that have been bent or otherwise damaged in an accident, or as a result of any other impact cannot be repaired and must not be used. They must be replaced immediately with original MARZOCCHI parts.
- Call the closest Service Center to you for comments, questions or problems. You will find it on the web site (www.marzocchi.com).

1.2.1 Preliminary controls before use

Before using the bicycle, always carry out following tests:

- Make sure that all quick release fasteners, nuts and bolts are properly adjusted.
- Bounce the bicycle on the ground and make sure all components remain in the correct position.
- Be sure that your tires are inflated to the correct pressure and that the tread or sidewall are not damaged.
- Be sure that none of the components of your bicycle are bent, damaged or out of alignment.
- Test your brakes at the beginning of your ride to make sure that they are operating properly.
- Check all reflectors to make sure that they are clean, straight and securely mounted.

1.2.2 Correct behavior principles during bike's use

- Follow the local bicycle laws and regulations and obey all traffic signals, signs and laws while you ride.
- Wear close-fitting clothes and which make you visible to traffic, such as neon, fluorescent, or other bright colors.
- Avoid biking at night, because visibility is lower and it is more difficult for you to see obstructions on the ground. If you do ride at night, you must equip your bicycle with a headlight and a taillight.
- When riding in wet conditions, the breaking power is greatly reduced and the adherence of the tires on the ground is considerably reduced. This makes it harder to control and stop your bicycle. In order to avoid an accident, extra care is therefore required when riding in such conditions.
- Always wear a bicycle protection helmet approved by ANSI or SNELL; it must be the right size and properly fastened.

2 TECHNICAL INFORMATION

2.1 Use applications

You will find in the following table the use applications of Marzocchi Monster Forks.

Do not use forks for an application that is different from the one provided by the manufacturer.

	M	A-XC	XC	DJ	FR	FR-DH
MONSTER T2						
MONSTER TRIPLE						
SUPER MONSTER						

- M** Marathon Enduro: for marathon and cross-country use.
- A-XC** Aggressive Cross Country: for aggressive cross-country use.
- XC** Cross-country: for moderate trails and touring.
- DJ** Slalom / Dirt Jumper: for dirt jumping and dual slalom.
- FR** Free Ride: for use on demanding trails.
- FR-DH** Extreme Freeride / Downhill Racing: specific for Downhill.

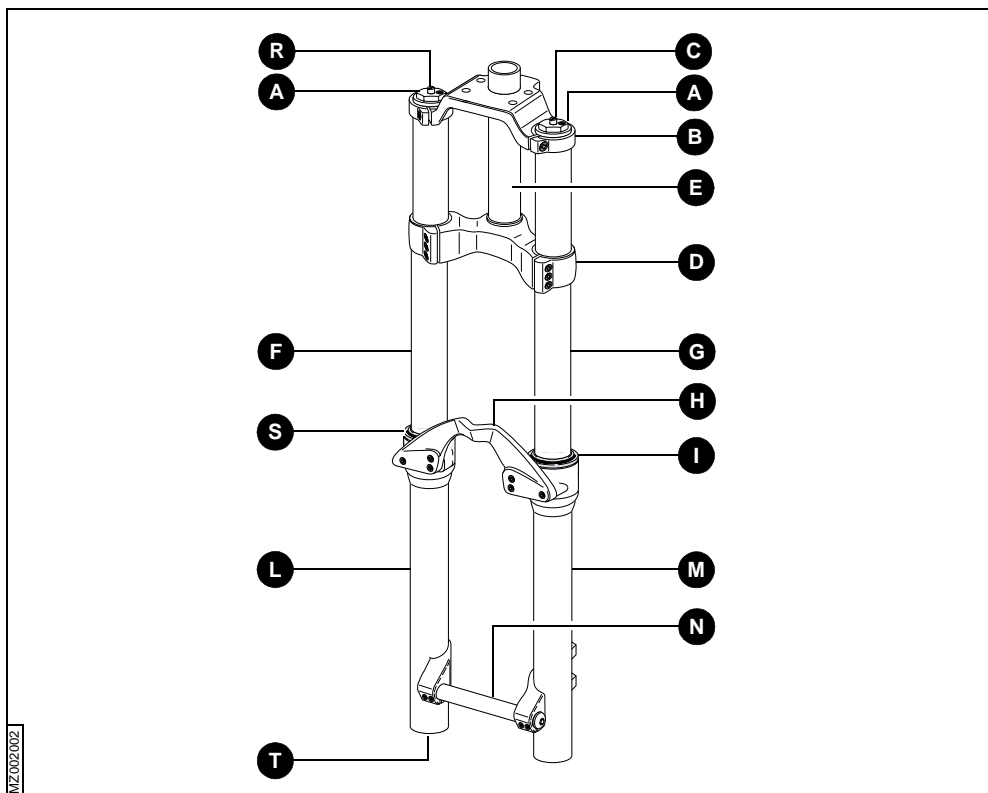
2.2 Fork's external components

The Marzocchi Monster forks are mainly made up of following components:

- A) Top cap
- B) Upper crown
- D) Lower crown
- E) Steer tube
- F) Right stanchion tube
- G) Left stanchion tube
- H) Arch
- L) Right slider
- M) Left slider
- N) Ø 20 mm wheel axle
- S) Dust seal

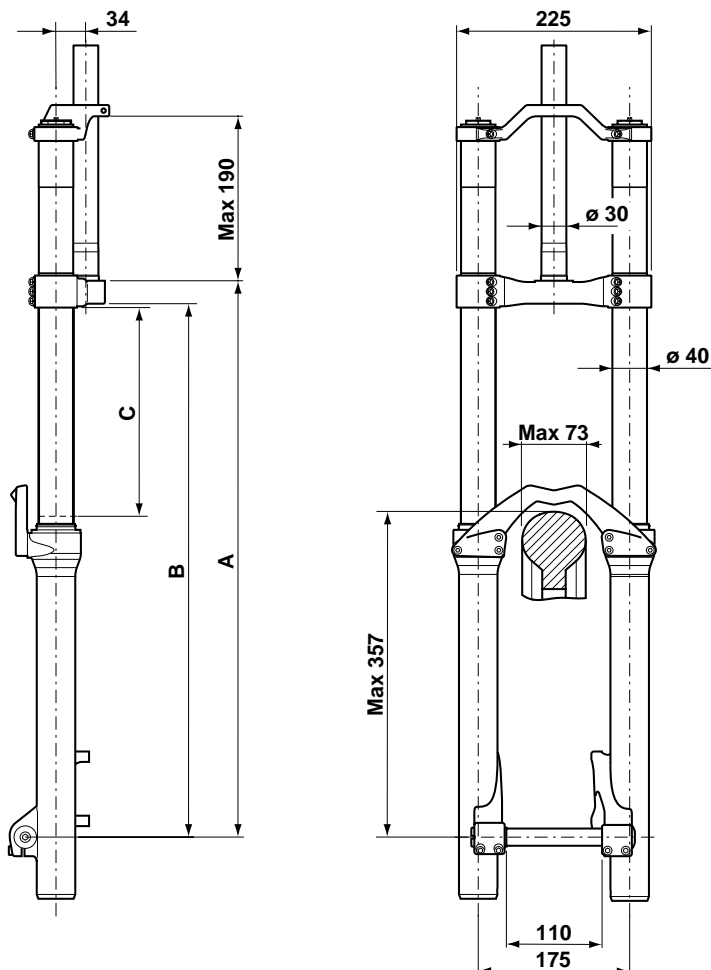
Moreover, the Monster Triple and Super Monster models are equipped with following adjustments:

- C) Compression adjustment- bottom out (top of left leg)
- R) Rebound adjustment (top of right leg)
- T) Compression adjustment (bottom of right leg)



2.2.1 Monster - My 2003

		MONSTER T2		MONSTER TRIPLE	SUPER MONSTER
TRAVEL (C)	mm	200	175	200	300
A	mm	590	578	582	682
A min	mm	392	392	392	392
B	mm	564	552	556	656
Drop out type		20 mm aluminium dedicated axle0			
Disk brake mounts		DH International Standard Post Mount for 8" disk			
Options		Direct mount handlebar clamp (long or short)			



MZ002003

Indicative sizes.

MZ002

2.3 Fork's internal components and fork's operation

Inside Marzocchi Monster forks you will find coil springs as a spring system.

The damping load that is generated during the fork legs compression and rebound are adjusted by damping systems, coming from the Motocross division, which operate according to compression speed.

The Monster model T2 is equipped with Ø 20 mm non-adjustable pumping elements; the Monster Triple and Super Monster are equipped with Ø 26 mm rebound and compression externally adjustable cartridges.

The damping systems are fully emerged in oil (Open Bath System). This system provides proper lubrication and cooling of the inner sliding parts; furthermore, the oil volume works as a damping and setting element.

The Open Bath system reduces the maintenance frequency if compared with a sealed cartridge system.

Stanchion tubes are guided in the sliders by two teflon-coated bushings, free from static friction.

The seal system prevents oil leaks and contamination from particles entering the fork. It uses a special dual-lip oil seal and a dust seal at the top of each slider.

English

Fork	Damping system	
	Right leg	Left leg
Monster T2	Ø 20 SSV non-adjustable pumping element, coming from the motocross division	Ø 20 SSV non-adjustable pumping element, coming from the motocross division
Monster Triple	Ø 26 cartridge, coming from the motocross division.	Ø 26 cartridge, coming from the motocross division.
Super Monster	Compression adjustment and rebound adjustment	Compression adjustment- bottom out

3 INSTALLATION

3.1 Installation on the frame

The fork is supplied with "A-Head Set" (threadless) steer tube to be cut according to frame size. Installing a MARZOCCHI fork on the bicycle frame is a very delicate operation that must be carried out by specialized personnel. The assembling on the frame and the steer tube adjustment must be carried out in compliance with the headset manufacturer's instructions.

Improper installation may jeopardize the safety of the rider. Marzocchi does not guarantee the installation and refuses all responsibility for damages and/or accidents that may be caused by an incorrect assembly.

The steer tube must be pressed into the crown; its replacement must be carried out by a Marzocchi service center only, using the required tools. In case of improper installation of the steer tube into the crown, the rider might lose control of his/her bicycle, thus resulting in serious injury.

Before assembly on the frame, make sure that the lower crown screws are correctly tightened. When the fork's legs are at travel's end, the "D" distance between the lower part of the lower crown and the dust seal must be bigger than 3 mm. The stanchion tubes clamping to the crowns has to be done in the areas where the diameter is bigger.

Make sure that the "H" distance is lower than 190 mm. A different position of the crowns could damage the fork and could be causing accidents.

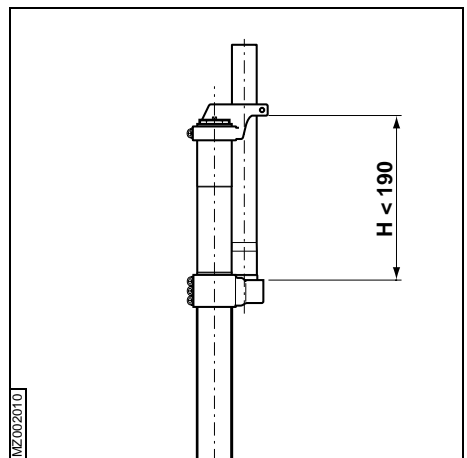
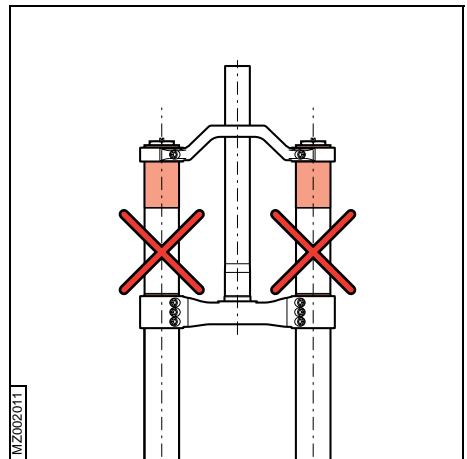
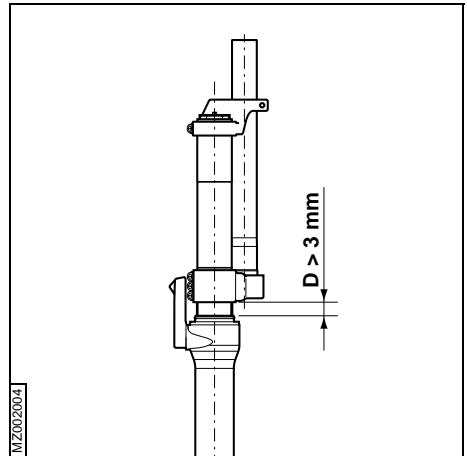
3.2 Installing the brake system

Assembling the brake system is a very delicate operation that must be carried out by specialized personnel.

Marzocchi does not guarantee the assembly and refuses all responsibility for damages and/or accidents that may be caused by an incorrect assembly.

Improper installation of the disk brake system can overstress the caliper mountings, which may break. The brake system assembling must be carried out in compliance with brake system's manufacturers instructions. Improper installation may jeopardize the safety of the rider.

Only use brake systems that are complying with the fork's specifications.



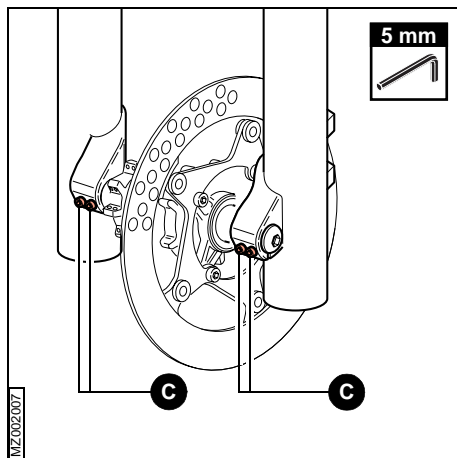
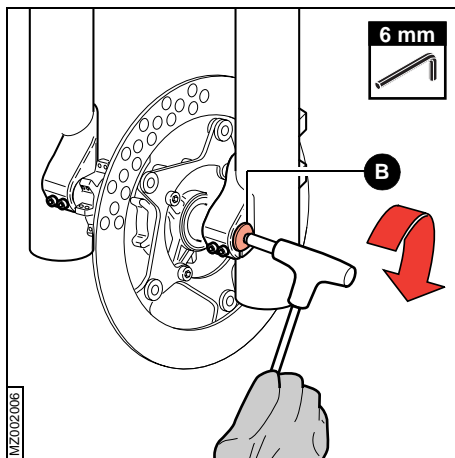
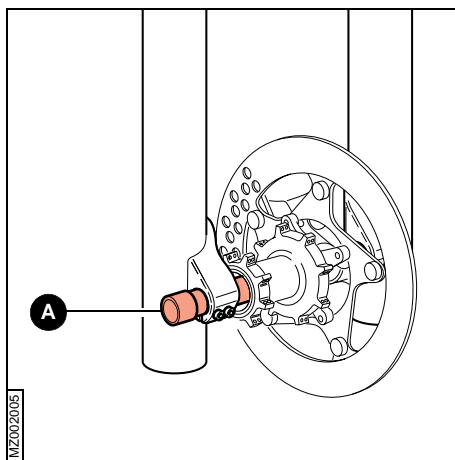
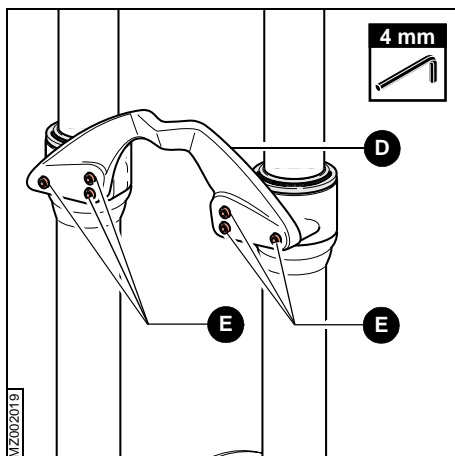
3.3 Wheel installing

Install the wheel in compliance with the bicycle manufacturer's instructions.

For correct fork function, please follow the instructions here below when installing the wheel.

- In case the fork has been disassembled from the bike frame or the fork's legs position in the crowns has been changed, you will have to slightly loose the 6 bolts (E) holding the arch (D) by means of a 4 mm hex key.
- Insert the wheel axle (A) through the right wheel axle clamp, then the wheel and the left wheel axle clamp.
- By using a 6 mm hex key, tighten the axle bolt (B) located on the left side to the required torque (see Table 1 - Tightening Torques).
- Fully compress the fork a few times.
- By using the 5 mm hex key, tighten the bolts (C) positioned on both dropouts to the required torque (see Table 1 - Tightening Torques), with the 1-2-1 sequence.
- By using the 4 mm hex key, tighten the bolts (E) with the sequence 1-2-3-2-1 to the required torque (see Table 1 - Tightening Torques).

Incorrect wheel alignment can misalign the legs make them unparallel, causing the fork to bind.



4 MAINTENANCE

4.1 Problems - Diagnosis - Solutions

This paragraph indicates some of the problems that may arise during the fork's use, as well as the possible causes of these problems and the suggested solutions.

Always check this table before working on the fork.

Operations inside the grey box must be carried out by authorized service centers.

Problem	Diagnosis	Solution
Fork has too much sag	Spring rate too soft or oil too fluid	Add spring preload by replacing the preload sleeve
		Check oil height
		Change to stiffer spring rate
Forks bottoms too easily, but it has the recommended sag	Not enough compression damping	Increase compression damping by changing oil level
		Increase compression damping*
Fork does not get full travel	Spring rate too stiff or fork oil too high	Check oil height; bottom out compression adjuster
		Get softer spring
		Decrease compression damping*
Fork bottoms out easily	Not enough compression damping	Increase high speed compression damping via the proper adjuster
Fork extends too quickly; harsh top-out after impacts	Not enough rebound damping	Increase rebound damping*
		Replace oil (SAE 7,5) with a higher viscosity
Front wheel wants to tuck under while cornering	Too much rebound damping; spring rate too soft	Decrease the rebound damping*
		Change to stiffer spring rate
Fork "packs up" or stays down in travel during multiple impacts	Too much rebound damping	Decrease rebound damping*
Loss of fork's smoothness	Presence of air inside the legs	Bleed the air
Knocking sound during rebound, but no harsh top-out	Too much rebound damping	Decrease rebound damping*
Oil "ring" on stanchions	Oil seals are contaminated	Replace all seals (repair the fork before using it again)
Heavy amount of oil on stanchions; oil dripping down legs	Seals are damaged, stanchions could be damaged	Replace all seals and have the stanchions inspected (repair the fork before using it again)
Fork is sticky; fork does not perform as new	Oil seals are contaminated; fork needs to be serviced	Replace all seals (repair the fork before using it again)
Oil leakage from the bottom of the leg	Loose bottom nut	Tighten bottom nut
	Bottom nut o-ring damaged	Replace o-ring
Loss of sensitivity	Worn bushings	Replace sliding bushings
	Old oil	Change oil

*This operation cannot be carried out on the Monster T2 model.

4.2 Periodical maintenance table

General maintenance operation	Use	
	Intense	Normal
Clean stanchions and dust seals	After every ride	
Oil change	50 hours	100 hours
Oil seals replacement	50 hours	100 hours

4.3 General safety regulations

After a complete breakdown, always use new seals when reassembling.

To tighten two bolts or nuts that are near each other, always follow the sequence 1-2-1 using the required tightening torque (see Table 1 - Tightening Torques).

Never use flammable or corrosive solvents to clean the parts, as these could damage the seals. If necessary, use specific detergents that are not corrosive, not flammable or have a high flash point, compatible with the seals materials and preferably biodegradable.

If you are planning not to use your fork for a long time, always lubricate the forks stanchions and seals with some fork oil before and after use.

Never pour lubricants, solvents or detergents which are not completely biodegradable in the environment; these must be collected and kept in the relevant special containers, then disposed of according to the regulations in force.

Use only metric tools, not standard tools, which may have similar sizes, but can damage the bolts and make it impossible to unscrew them.

Use the right size and sort of screwdriver to unscrew slotted or crosshead screws.

When using a screwdriver to assemble or disassemble metal stop rings, o-rings, sliding bushings or seal segments, avoid scratching or cutting the components with the screwdriver tip.

Only proceed to maintenance/overhaul operations if you are sure you are able to do it and you have the right tools. If this is not the case, or if you are unsure, please contact an authorized service center, where specialized technicians with the right tools and original spare parts will service and overhaul your fork, putting it back into its original working conditions.

Only use original spare parts.

Work in a clean, ordered and well-lit place; if possible, avoid servicing outdoors.

Polished surfaces need to be periodically treated with polishing compound to be kept as new.

Carefully check there are no metal shavings or dust in the work area.

Do not modify the fork's components.

4.4 Cleaning the fork legs and the dust seals

The manufacturer lubricates the fork dust seal with some grease, which makes the stanchion tube sliding easier, especially when the fork has not been used for a long time.

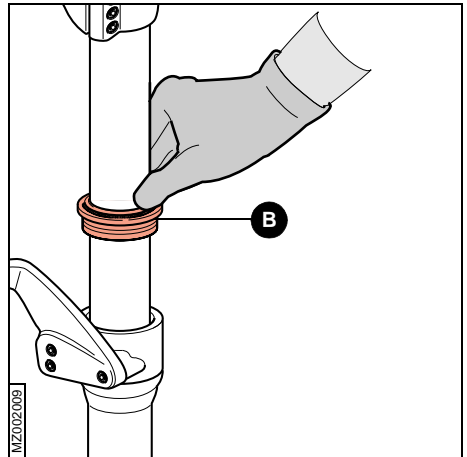
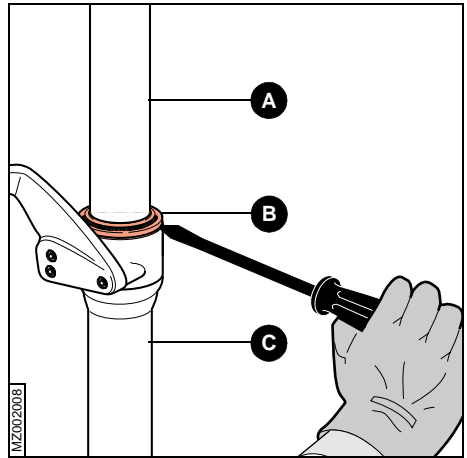
When using the fork, such grease can melt and stick to the stanchions, looking like an oil leak, although it is not.

- Carefully clean the stanchion tube (A) after every use.
- With a small screwdriver, pry the dust seal (B) off the slider (C), avoiding scratching the stanchion tube.
- Slide the dust seal along the stanchion tube and clean inside the dust seal and its seat on the slider with a jet of compressed air.

It is advisable to tip the fork's leg to pour out any particles that may be contained in the fork.

Never use metal tools to clean any particles of dirt.

- Compress the fork legs slightly and remove any traces of dirt from the stanchion tubes.
- Lubricate the dust seal and the visible surfaces of the oil seal with some silicon grease.
- Re-assemble the dust seal (B) in its seat, pressing it in with your hands.



4.5 Bleeding the air

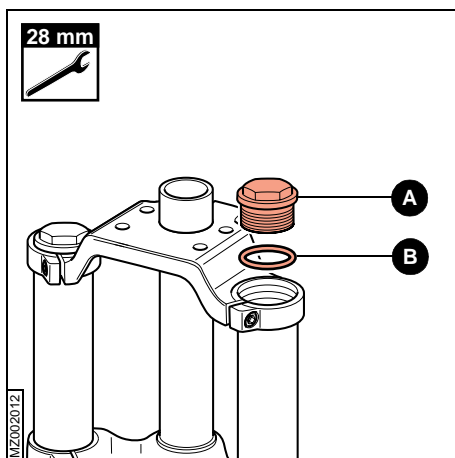
This operation must be carried out with the fork assembled on the bicycle and with the fork's legs fully extended (front wheel off the ground).

The pressure generated by air that can develop in the fork legs while the bike is being used due to the special shape of the oil seals remains trapped inside, can cause the fork to malfunction.

In case of malfunction or loss of legs' smoothness, please carry out following operation on both legs:

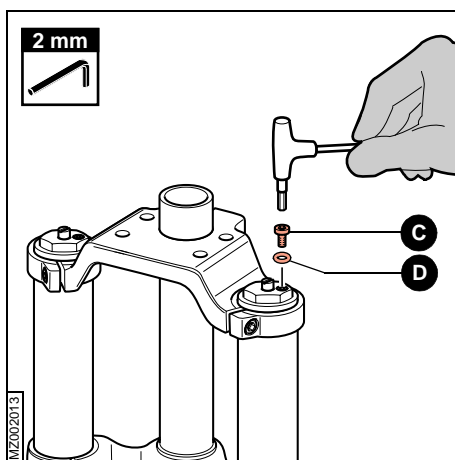
Monster T2

- Unscrew the cap (A) using a 28 mm key as much as needed to release any air pressure that may have developed inside the leg.
- Check the oil seal (B) condition; replace if needed.
- Tighten the cap (A) to the recommended torque (see Table 1 - Tightening Torques), being careful not to damage the oil seal (B).



Monster Triple and Super Monster

- By means of a 2 mm hex key, unscrew the air bleed screw (C) located on the cap, in order to release the pressure generated inside the fork's leg.
- Check the oil seal (D) condition; replace if needed.
- Tighten the air bleed screw (C) to the recommended torque (see Table 1 - Tightening Torques), being careful not to damage the oil seal (D).



5 ADJUSTMENTS

In order to change the Monster T2 fork setting please contact the authorized service centers.

The Monster Triple and Super Monster forks behavior can be adjusted according to user's needs, by means of three adjusters:

- Rebound adjustment (top of right leg).
- Compression adjustment (bottom of right leg).
- Compression adjustment- bottom out (top of left leg).

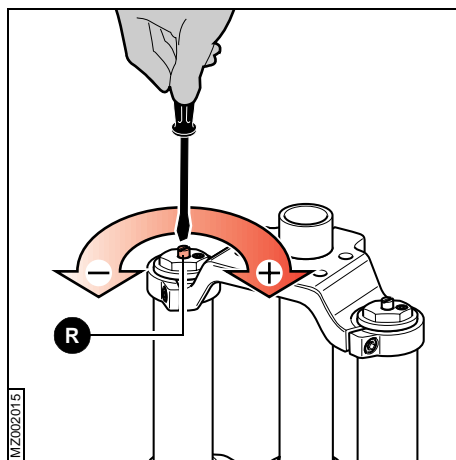
5.1 Rebound adjustment

By acting on the adjustment screw (R), located on top of the right leg, you can control the fork's rebound damping.

By turning the adjustment screw and using a proper small, flat tip screwdriver, you can adjust the hydraulic configuration of the inner valves that control the rebound.

- When turning the adjuster clockwise, you will increase the rebound damping, making the fork slower during the rebound phase.
- When turning the adjuster counterclockwise, you will decrease the rebound damping, making the fork more responsive during the rebound phase.

Do not force the adjuster screw (R) past its limits.



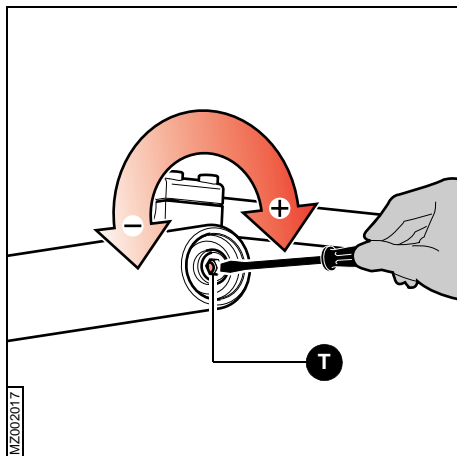
5.2 Compression adjustment

By acting on the adjustment screw (T), located on bottom of the right leg, you can control the fork's compression damping.

By turning the adjustment screw and using a small, flat tip screwdriver, you can adjust the hydraulic configuration of the inner valves that control the compression.

- When turning the adjuster clockwise, you will increase the compression damping, reducing the travel that is achieved by the fork under the same compression force.
- When turning the adjuster counterclockwise, you will decrease the compression damping, making the fork softer during impacts.

Do not force the adjuster screw (T) past its limits.



5.3 Compression adjustment at bottoming

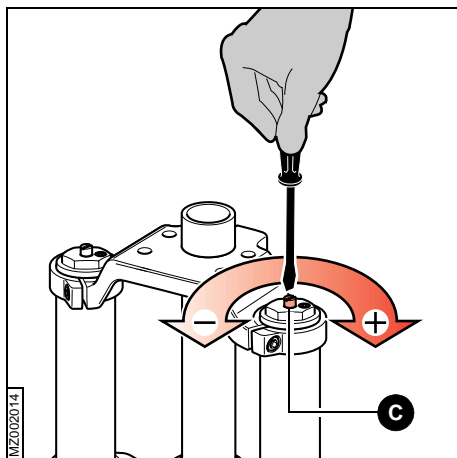
By acting on the adjustment screw (C), located on top of the left leg, you can control the fork's compression damping and its resistance to bottoming out.

By turning the adjustment screw and using a small, flat tip screwdriver, you can adjust the hydraulic configuration of the inner valves that control the compression at the end of the travel.

By acting on this adjuster you can modify the fork's behavior during the final part of its travel only, without changing the fork's damping at the beginning of its travel.

- When turning the adjuster clockwise, you will increase the damping, helping prevent the fork from bottoming out.
- When turning the adjuster counterclockwise, you will decrease the damping.

Do not force the adjuster screw (C) past its limits.



6 TABLES**6.1 Table 1 - Tightening Torques**

Component to be tightened	Tightening Torque (Nm)
Wheel axle bolts	15
Wheel axle hex bolts	10
Fork's top cap	20
Air bleed screw	3
Footnut (Monster T2)	11
Footnut (Monster Triple, Super Monster)	25
Arch bolts	6

NOTES

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